

**METHOD OF ELECTRICALLY CONNECTING SEMICONDUCTOR CHIP TO
SOLDER BALLS ON BALL GRID ARRAY PACKAGE**

ABSTRACT OF THE DISCLOSURE

A method for electrically connecting a semiconductor chip to solder balls on a BGA - 5 (Ball Grid Array) package is proposed. The proposed method is characterized by the use of an electrically-conductive bridge to span in an overhead manner across a continuous electrically-conductive trace that is interposed between a corresponding pair of bond finger and via. The electrically-conductive bridge can be either a gold wire bonded through existing wire-bonding process, or a zero-resistance chip resistor bonded through existing surface-mount technology (SMT). Conventionally, the interposing trace can be bypassed by using a multi-layer substrate. By the proposed method, however, it can be implemented on existing single-layer substrate without having to use multi-layer substrate, and which can be implemented by using existing technology, such as wire-bonding technology or surface-mounting technology, without having to employ more expensive and advanced technologies.

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